

CLAIMS

1. Use, in degreasing/ cleaning hard surfaces such as metal surfaces, of at least one compound employed in a concentration in the range 0.01 to 10 g/l during use of said compound, having the following formula (I):



in which formula:

- Z represents a bicyclo[a,b,c]heptenyl or bicyclo[a,b,c]heptyl radical, where:

$$a + b + c = 5$$

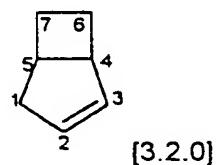
$$a = 2, 3 \text{ or } 4;$$

$$b = 2 \text{ or } 1;$$

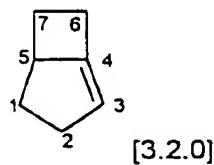
$$c = 0 \text{ or } 1;$$

said radical optionally being substituted by at least one C₁-C₆ alkyl radical and comprising a backbone Z selected from those indicated below, or the corresponding backbones minus the double bond:

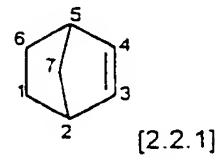
a)



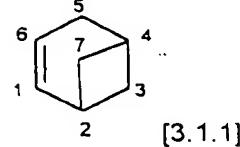
b)



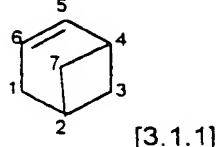
c)



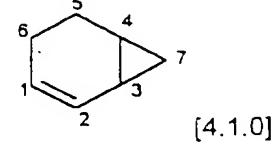
d)



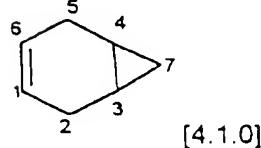
e)



f)



g)



- X represents $-\text{CH}_2\text{-C}(\text{R}^1)(\text{R}^2)\text{-O-}$ or $-\text{O-CH}(\text{R}^1)\text{-CH}(\text{R}^2)\text{-O-}$, in which:
 - R^1 , R^2 , R'^1 and R'^2 , which may be identical or different, represent hydrogen or a linear, branched or cyclic, saturated or unsaturated $\text{C}_1\text{-C}_{22}$ hydrocarbon radical, preferably $\text{C}_1\text{-C}_6$;
 - R^3 and R^4 , which may be identical or different, represent hydrogen or a linear, branched or cyclic, saturated or unsaturated $\text{C}_1\text{-C}_{22}$ hydrocarbon radical, provided that at least one of radicals R^3 or R^4 is other than hydrogen;
 - R^5 represents hydrogen, linear, branched or cyclic, saturated or unsaturated, aromatic or non-aromatic $\text{C}_1\text{-C}_{22}$ hydrocarbon radical,, which may be substituted, or a group selected from the following:

- SO_3M

- $\text{OPO}_3(\text{M})_2$

-(CH_2) $_r\text{-COOM}$

-(CH_2) $_z\text{-SO}_3\text{M}$

- in which formulae:

 - M represents hydrogen, an alkali metal or an ammonium function $\text{N}(\text{R})_4^+$, in which R, which may or may not be identical, represents hydrogen or a linear, branched or cyclic, saturated or unsaturated $\text{C}_1\text{-C}_{22}$ hydrocarbon radical,, which may be hydroxylated;
 - r is in the range 1 to 6;
 - z is in the range 1 to 6;

- n is a whole or fractional number in the range 3 to 5 inclusive;
- p is a whole or fractional number in the range 6 to 10, limits excluded.

2. Use according to the preceding claim, characterized in that the compound is such that in formula (I), n is equal to 3.
3. Use according to any one of the preceding claims, characterized in that the compound is such that in formula (I), p is in the range 6.2 to 7, limits included, preferably in the range 6.3 to 7, limits included.
4. Use according to claim 1, characterized in that the compound is such that in formula (I), n is in the range 4 to 5.
5. Use according to the preceding claim, characterized in that the compound is such that in formula (I), p is in the range 7 inclusive to 10 exclusive, preferably in the range 8 inclusive to 10 exclusive.
6. Use according to any one of the preceding claims, characterized in that the compound is such that in formula (I), radical Z is substituted on at least one of its carbon atoms by two C₁-C₆ alkyl radicals.
7. Use according to any one of the preceding claims, characterized in that the compound is such that in formula (I), X represents -CH₂-C(R¹)(R²)-O- and in that the backbone Z is selected from formulae c) to g).
8. Use according to any one of the preceding claims, characterized in that the compound is such that in formula (I), backbone Z is selected from formulae d) and e).
9. Use according to any one of claims 1 to 5, characterized in that the compound is such that in formula (I), X represents -O-CH(R'¹)-C(R'²)-O- and in that radical Z corresponds to backbone c), the bicyclic backbone being free of a double bond.
10. Use according to the preceding claims, characterized in that the compound is such that in formula (I), radical Z is substituted by a C₁-C₆ alkyl radical, preferably a methyl radical on carbon 2 or carbon 5 of the bicycle.

11. Use according to any one of the preceding claims, characterized in that the compound is used for degreasing/cleaning metal plates; the concentration of compound is in the range 0.01 to 5 g/l during use.
12. Use according to any one of claims 1 to 10, characterized in that the compound is used for degreasing/cleaning platforms; the concentration of compound is in the range 0.01 to 10 g/l during use.
13. Use according to any one of claims 1 to 10, characterized in that the compound is used for degreasing/cleaning oil production wells; the concentration of compound is in the range 0.01 to 5 g/l.